

Nursing Older People

Healthy smile, healthy me: developing an integrated resource to promote the oral health of older adults in nursing homes

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Abstract:	Public health nursing practice should adopt a life course approach to the promotion of health and wellbeing. This requires a renewed focus on health promotion interventions focused on older adults, including those resident in nursing homes. The oral health status of older people in nursing homes has been reported as sub-optimal, predisposing to poorer health-related quality of life. Interventions for nurses, other caregivers and older adults, focusing on knowledge and behaviours related to oral health management have the potential to improve the provision of oral health care. This paper details a project undertaken by a team of pre-registration nursing students to plan and develop an integrated health promotion resource 'Healthy Smile, Healthy Me', comprising of a '5-Steps for Oral Health' poster and an 'Oral Health Box', aimed towards enhancing the oral health of older people in nursing homes.
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Question	Response
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Healthy smile, healthy me: developing an integrated resource to promote the oral health of older adults in nursing homes

Abstract

Public health nursing practice **should** adopt a life course approach to the promotion of health and wellbeing. This requires a renewed focus on health promotion interventions focused on older adults, including those resident in nursing homes. The oral health status of older people in nursing homes has been reported as sub-optimal, predisposing to poorer health-related quality of life. Interventions for nurses, other caregivers and older adults, focusing on knowledge and behaviours related to oral health management have the potential to improve the provision of oral health care. This paper details a project undertaken by a team of pre-registration nursing students to plan and develop an integrated health promotion resource 'Healthy Smile, Healthy Me', comprising of a '5-Steps for Oral Health' poster and an 'Oral Health Box', aimed towards enhancing the oral health of older people in nursing homes.

Introduction

Public health is the **responsibility** of every nurse who must endeavour to maximise the health and wellbeing of individuals, the wider community and the population as a whole (Winslade 2013). Public health nursing practice needs to be embedded in the values, environment and culture of everyday nursing care. **Everyday examples of public health practice when nursing older people include the promotion of oral health and the prevention of falls.** It is not about 'making' additional time to carry out a health promotion activity or deliver an intervention. It is about making every contact count as a real opportunity to empower people to take responsibility for and to optimise their own health and well-being (Department of Health 2012, Nursing and Midwifery Council 2015). It is underpinned by the use of evidence-based knowledge and a diverse range of skills including needs assessment; collaborative working; development, implementation and evaluation of innovative health promotion programmes; leadership; policy and strategy development; and research.

Older adults have long been neglected as a target audience for public health nursing activities (Golinowska *et al* 2016). Until the late 1990s it was incorrectly assumed that older adults were not a good target for health promotion as it was considered too late to change their lifestyle. Encouraging older adults to increase physical activity levels, alter dietary habits, reduce alcohol intake or stop smoking was perceived as disturbing their 'peace and

contentment'. It was not until publication of 'A Life Course Approach to Health' by the World Health Organisation in 2000, emphasising a healthy lifestyle at every stage of life, that health promotion initiatives directed towards older adults began to evolve. Evidence of the effectiveness of health promotion interventions in improving and maintaining the health of older adults continues to emerge (Golinowska *et al* 2016). The purpose of this paper is to outline a project undertaken by a team of nursing students to plan and develop an integrated health promotion resource, in the form of a '5-Steps for Oral Health' poster and an 'Oral Health Box', aimed towards enhancing the oral health of older people in nursing homes.

Background

Advancements in early diagnosis, improvements in medical treatments (Putten *et al* 2013), and implementation of national and international strategies directed towards minimising socio-economic inequalities, have all contributed to people living longer (Public Health England, 2015). As people live longer, they face increased level of health problems, associated with physical and mental decline (Reddy 2016). This includes oral health problems which are largely associated with the ageing process (Lewis *et al* 2015). Despite increasing research into healthy ageing and improving independence in older age, there is relatively less emphasis on oral health problems (Petersen and Yamamoto 2005). Oral health is an important aspect of people's health, and has an impact on general health, well-being and quality of life (Royal College of Nursing (RCN) 2011, Porter *et al* 2015, Hoben *et al* 2016). Poor oral health is associated with poor nutritional intake, diabetes, cardiovascular and pulmonary disease, mainly aspirational pneumonia (RCN 2011, World Health Organisation 2012). It affects not only a physical health but also psychological well-being, and may alter communication abilities, cause pain and discomfort (RCN 2011, Lewis *et al.* 2015). Poor oral health amongst older people is a significant global problem with the Global Burden of Disease 2010 Study reporting that oral health problems accounted for 15 million disability-adjusted life years, suggesting a health loss of 224 years per 100 000 population (Marcenes *et al* 2013). Although edentulism (complete loss of natural teeth) has declined in recent decades, older people depend more on others to maintain their oral hygiene (Zenthofer *et al* 2014, Porter *et al* 2015, Oral Health Foundation 2017). In addition, poor self-rated oral health and conditions such as periodontal (gum) disease, tooth loss and dry mouth present considerable health challenges for older people (Lindqvist *et al* 2013, Marcenes *et al* 2013, Ramsay *et al* 2015, Patii *et al* 2016).

An increasing older population has led to a greater number of people requiring nursing home care (Zenthofer *et al* 2014, Hoben *et al* 2015). Indicators of poor oral health (for example; chewing difficulties, caries and gingivitis), together with pain and discomfort, have been reported among nursing home residents in different countries (De Visschere *et al* 2006, Gluhak *et al* 2010, Hopcraft *et al* 2012). Porter *et al* (2015) point out that poor oral health is more prevalent among older people in care facilities as compared to a similar group of older people living in the community. This finding has been supported by other studies and reports (British Dental Association (BDA) 2012, Regulatory and Quality Improvements Authority (RQIA) 2012, Porter *et al* 2015, Reigle and Holm 2016). In Northern Ireland, it has been reported that over 70% of care home residents had poor oral health (RQIA 2012), and that their oral needs had not been met (BDA, 2012). These findings confirm those of an earlier Scottish study by Sweeney *et al* (2007) who found that more than 75% of residents had received no basic oral hygiene. As the cognitive impairment and care dependency increases so also does older people's inability to attend to their own oral hygiene (Janssens *et al* 2014). In many situations, older adults in care settings greatly depend on caregivers to assist and perform oral hygiene (Weening-Verbree *et al* 2013).

Although nurses have a legal and professional obligation to maintain the oral health of older people requiring care (RCN 2011, Willumsen *et al* 2011, UK Government 2014, NMC 2015, National Institute for Health and Care Excellence (NICE) 2016), it has been shown that they often fail to do so (BDA 2012, Francis Report 2013). Porter *et al* (2015) claim that oral health is not a priority for many caregivers, including nurses, with Reigle and Holm (2016) pointing to oral hygiene being described as a low priority and unpleasant task. The BDA (2012) highlighted that some caregivers' attitudes towards oral health were very negative, with oral hygiene being described as a "repulsive activity". Caregivers have reported that facilitating oral hygiene for older people can be challenging due to individuals' disruptive behavioural responses, and lack of compliance with offered care (Lindqvist *et al* 2012, Yoon and Steele 2012). Additionally, caregivers have also reported that insufficient time, training and resources have further impacted on their ability to effectively carry out oral health care (Willumsen *et al* 2011, McKeown *et al* 2014, Hoben *et al* 2016).

Nevertheless, evidence suggests that providing nurses and other caregivers with appropriate up-to-date oral health education and supplemented resources can significantly improve oral care delivered for older people, thereby improving older people's oral health and quality of

life (Kullberg *et al* 2010, Willumsen *et al* 2012, McKeown *et al* 2014). Weening-Verbree *et al* (2013) further report that improving oral health reflects a combination of knowledge, competence and behaviour changes among caregivers. Consequently, planning and development of the ‘5-Steps for Oral Health’ poster was directed towards increasing caregivers’ awareness and knowledge of oral health care whilst the ‘Oral Health Box’ sought to foster behavioural change by increasing compliance and concordance with the delivery of an oral hygiene daily routine for older adults in nursing home settings.

5-Steps for Oral Health Poster

It is accepted that posters are a valid way of transferring health information; adding value to any health message, overcoming misleading language, presenting a unified vision and promoting a strong sense of ownership amongst its target audience (Kolhi *et al* 2017). A laminated poster was designed to provide a concise overview of a 5-step guide to delivering oral health care. The poster incorporated simple but clear written messages together with pictorial designs (Evans *et al* 2017) to outline five steps of daily oral care, including day and night routines. The written messages and pictorial designs aimed to aid information recognition and readability. The five steps for oral health reflect NICE (2016) recommendations with respect to brushing natural teeth at least twice a day with fluoride toothpaste and the individual’s choice of toothbrush; providing daily oral care for full or partial dentures using the individual’s choice of cleaning products; and using daily use of mouth care products as prescribed by dental clinicians. It is envisaged that the poster will be placed at eye level in bathrooms within nursing homes where it will be easily accessible to caregivers, older people and their families.

Oral Health Box

Despite the recognised benefits of a poster, development of the ‘Oral Health Box’ was guided by evidence which suggests that a standalone poster should not be used in an attempt to achieve knowledge transfer but rather that, an integrated approach with supplemental material is required to achieve changes in user knowledge, attitude and behaviour (Ilac and Rowe 2013). Moreover, the lack of appropriate oral hygiene equipment has been cited by caregivers as one of the reasons for not providing oral hygiene for older people in nursing homes (Willumsen *et al* 2011, McKeown *et al* 2014). The ‘Oral Health Box’ was designed to promote behavioural change in caregivers through ‘nudge therapy’ (WHO 2017) and also to be used independently by the older person. Reigle and Holm (2015) report that encouraging,

educating and supporting older people will enable them to remain more independent with respect to oral self-care. The 'Oral Health Box' was designed to store the necessary oral hygiene resources in one place, and make it accessible for both the older person and the caregiver. The box also had a compartment for dental prosthetics as many older people in nursing homes wear partial or full dentures (De Visschere *et al* 2016). A person-centred approach was adopted as oral hygiene sundries contained within the box were specific to the older person. A mirror was included to encourage inclusion and partnership between the caregiver and the older person. Bright primary colours were used for the box whilst attached printed information was in black and white. The use of such colours was based on the idea that using colour and contrast draws the attention and may help older persons with impaired eyesight or dementia to identify required items (Dementia Centre 2017). Printed information on the box further emphasised the '5-Steps for Oral Health'. The older person's name was included on the side of the box, with "hello my name is..." logo (NHS 2017), to promote a more personalised and individualistic approach.

Piloting and future research

To date, preliminary piloting of both the '5-Steps for Oral Health' poster and the 'Oral Health Box' has been undertaken within one private nursing home. Caregivers have reported a greater awareness of and attention to the oral health care of older adults within the nursing home with comments such as 'the poster reminds you to clean their dentures because to be honest, most nights I forgot ...' and 'you can't miss the box and everything is there in the one place, it makes it easier to encourage or help them to clean their teeth'. However, much greater insight into the potential feasibility, acceptability and efficacy of the '5-Steps for Oral Health' poster and the 'Oral Health Box' is required. We therefore plan to conduct a pre- and post-intervention study across a number of nursing home settings within Northern Ireland to examine outcomes including the oral health of older people; and the oral health-related knowledge, attitudes and behaviours of both older people and caregivers.

Conclusion

Oral health care for older persons in nursing homes is less than optimal, predisposing to adverse consequences for individuals' health and quality of life. To provide the best possible oral health care for older people, nurses and other caregivers need to develop innovative approaches. An integrated health promotion resource such as the '5-Steps for Oral Health' poster and the 'Oral Health Box' has the potential to educate, encourage and motivate nurses,

other caregivers and older people themselves to perform oral health care. Future research is required to assess the effectiveness of this resource as the next step in establishing an evidence base on this topic area.

References

British Dental Association (2012) *Dentistry in care homes research – UK*. London: British Dental Association.

Dementia Centre (2017) *Colour and Contrast*. Available at:
www.dementia.stir.ac.uk/design/good-practice-guidelines/colour-and-contrast

Department of Health (2012) *Making Every Contact Count*. London: Department of Health.

De Visschere, L.M., Grooten, L., Theuniers, G. and Vanobbergen, J.N. (2006) Oral hygiene of elderly people in long-term care institutions – a cross-sectional study. *Gerodontology*, 23(4):195-204.

De Visschere L, Janssens B, De Reu G, Duyck J and Vanobbergen J. (2016) An oral health survey of vulnerable older people in Belgium. *Clinical Oral Investigations*, 20:1903–1912.

Evans, D., Coutsaftiki, D., Fathers, C.P. (2017) *Health Promotion and Public Health for Nursing Students*. 3rd ed. London, Sage Publications Ltd.

Francis, R. (2013) *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. Available at: <https://www.gov.uk/government/publications/report-of-the-mid-staffordshire-nhs-foundation-trust-public-inquiry>

Gluhak, C., Arnetzl, G.V., Kirmeier, R., Jakse, N. and Arnetzl, G. (2010) Oral status among seniors in nine nursing homes in Styria, Austria. *Gerodontology*, 27(1):47-52.

Golinowska, S., Groot, W., Baji, P., & Pavlova, M. (2016). Health promotion targeting older people. *BMC Health Services Research*, 16(Suppl 5): 345. <http://doi.org/10.1186/s12913-016-1514-3>

Hoben, M., Kent, A., Kobagi, N. and Yoon M.N. (2016) Effective strategies to motivate nursing home residents in oral healthcare and to prevent or reduce responsive behaviours to oral healthcare: a systematic review protocol. *British Medical Journal Open*, 6(3): e011159

Hopcraft, M.S., Morgan, M.V., Satur, J.G. and Wright, F.A. (2012) Edentulism and dental caries in Victorian nursing homes. *Gerodontology*, 29(2):e512-9.

Ilic, D. and Rowe, N. (2013) What is the evidence that poster presentations are effective in promoting knowledge transfer? A state of the art review. *Health Information and Libraries Journal*, 30(1):1471-1842.

Janssens, B., Visschere, L., Van der Putten, G.J., Lugt-Lustig, K., Schols, J.M.G.A. and Vanobbergen, J. (2016) Effect of an oral healthcare protocol in nursing homes on care staffs' knowledge and attitudes towards oral health care: a cluster-randomised controlled trial. *Gerodontology*, 33(20):275-286.

Kohli, R., Nelson, S., Ulrich, S., Finch, T., Hall, K. and Schwarz, E., (2017). Dental care practices and oral health training for professional caregivers in long-term care facilities: An interdisciplinary approach to address oral health disparities. *Geriatric Nursing*, 38(4): 296-301.

Kullberg, E., Forsell, M. and Wedel, P. (2010) Dental hygiene education for nursing staff. *Journal of Advanced Nursing*, 66(6):1273-1279

Lewis, A., Wallace, J., Deutsch, A. and King, P. (2015) Improving the oral health of frail and functionally dependent elderly. *Australian Dental Journal*, 60(1): 95-105.

Lindqvist, L., Seleskog, B., Wardh, I. and Bultzingslowen, I. (2013) Oral care perspectives of professionals in nursing homes for the elderly. *International Journal of Dental Hygiene*, 11(4):298-305.

Marcenes, W., Kassebaum, N.J., Bernabé, E, Flaxman, A., Naghavi, M., Lopez, A. and Murray, C.J. (2013) Global burden of oral conditions in 1990–2010: a systematic analysis. *Journal of Dental Research*, 92(7):592–597.

McKeown, L., Woodbeck, H. and Lloyd, M. (2014) A journey to improve oral care with best practices in long-term care. *Canadian Journal of Dental Hygienists*, 48(2), 57-62.

National Health Service (NHS) (2017) #hellomynameis. Available at:

<http://www.nhs.employers.org/campaigns/hello-my-name-is>

National Institute for Health and Care Excellence (2016) *Oral health for adults in care homes: NICE guideline [NG48]*. Available at: <https://www.nice.org.uk/guidance/ng48>

Nursing and Midwifery Council (2015) *The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives*. London: NMC.

Oral Health Foundation (2017) *Facts and Figures*. Available at:

<http://www.nationalsmilemonth.org/facts-figures/>

Patii, A., Varekar, A., Patii, P. and Shigli, A. (2016) Ageing...global crisis for poor oral health. *Journal of Gerontology and Geriatric Research*, 5:4. Available at: <https://www.omicsonline.org/open-access/ageingglobal-crisis-for-poor-oral-health-2167-7182-1000335.pdf>

Petersen, P.E. and Yamamoto, T. (2005) Improving the oral health of older people: The approach of the WHO Global Oral Health Programme. *Community Dentistry and Oral Epidemiology*, 33(2): 81-92.

Porter, J., Ntouva, A., Read, A., Murdoch, M., Ola D. and Tsakos, G. (2015) the impact of oral health on the quality of life of nursing home residents. *Health and Quality of Life Outcomes*, 13:102.

Public Health England (2015) *What is known about the Oral Health of Older People in England and Wales: A Review of Oral Health Surveys of Older People*. London: Public Health England.

Putten, G., Baat, C., Visschere, L., Schols, J. (2014) Poor oral health, a potential new generic syndrome. *Gerodontology*, 31(1): 14-24.

Ramsay, S.E., Whincup, P.H., Watt, R.G., Tsakos, G., Papacosta, A.O., Lennon, L.T. and Wannamethee, S.G. (2015). Burden of poor oral health in older age: findings from a population-based study of older British men. *British Medical Journal Open*, 5:e009476.

Reddy, K.S. (2016) Global Burden of Disease Study 2015 provides GPS for global health 2030. *The Lancet*, 388(10053); 1446-1448.

Regulation and Quality Improvements Authority (2012) *Guidelines for the Oral Healthcare of Older People living in Nursing and Residential Homes in Northern Ireland*. Belfast: Guidelines and Audit Implementation Network.

Reigle, J.A. and Holm, K. (2016) Knowledge of oral health of nursing staff caring for disadvantaged older people. *Journal of Nursing Education and Practice*, 6(1):31-38.

Royal Collage of Nursing (2011) *Promoting Older People's Oral Health*. London: RCN Publishing.

Sweeney, M.P., Williams, C., Kennedy, C., Macpherson, L.M., Turner, S. and Bagg, J. (2007) Oral health care and status of elderly care home residents in Glasgow. *Community Dental Health*, 24(1):37-42.

UK Government (2014) *Care Act*. Available at: <http://bit.ly/2g04VRG>

Weening-Verbree, L., Waal G.H., Dusseldorp, L., Achterberg, T. and Schoonhoven, L. (2013) Oral health care in older people in long term care facilities: a systematic review of implementation strategies. *International Journal of Nursing Studies*, 50(4):569-582.

Willumsen, T., Karlsen, L., Naess, R. and Bjorntvedt, S. (2012) Are the barriers to good oral hygiene in nursing homes within the nurses or the patients? *Gerodontology*, 29(2):e748-e755.

Winslade, J., Barber, N. and Williams, H. (2013) Public health is every nurse's responsibility. *Nursing Times*, 109(24):12-13.

World Health Organisation (2000) *The Implications for Training of Embracing A Life Course Approach to Health*. Geneva: WHO.

World Health Organisation (2012) *Oral Health*. Available at:

<http://www.who.int/mediacentre/factsheets/fs318/en/>

World Health Organisation. (2017) Clean Care is Safer Care. Available at:

www.who.int/gpsc/tools/Five_moments/en/

Yoon, M.N and Steele, C.M. (2012) Health care professionals' perspectives on oral care for long-term care residents: Nursing staff, speech-language pathologists and dental hygienists. *Gerodontology*, 29(2):e525-e535

Zenthofer, A., Rammelsberg, P., Cabrera, T., Schroder, J. and Hassel, A.J. (2014)

Determinants of oral health-related quality of life of the institutionalized elderly.

Psychogeriatrics, 14(4): 247-254.

Reviewer Comment	Response
<p>Change ‘must’ to ‘should’ in the following sentence:</p> <p><i>Public health nursing must adopt a life course approach to the promotion of health and wellbeing.</i></p>	<p>The first sentence of the Abstract has been amended as follows:</p> <p><i>Public health nursing practice should adopt a life course approach to the promotion of health and wellbeing.</i></p>
<p>Use a different word for ‘business’ in the following sentence:</p> <p><i>Public health is the business of every nurse who must endeavour to maximise the health and wellbeing of individuals, the wider community and the population as a whole (Winslade 2013).</i></p>	<p>The first sentence of the Introduction has been amended as follows:</p> <p><i>Public health is the responsibility of every nurse who must endeavour to maximise the health and wellbeing of individuals, the wider community and the population as a whole (Winslade 2013).</i></p>
<p><i>Public health nursing practice needs to be embedded in the values, environment and culture of everyday nursing care.</i></p> <p>Give an example of everyday care and link to oral health.</p>	<p>The following sentence has now been included:</p> <p><i>Everyday examples of public health practice when nursing older people include the promotion of oral health and the prevention of falls.</i></p>
<p>Incorrect referencing format:</p> <p>(Royal College of Nursing (RCN) 2011, Porter et al. 2015, Hoben et al. 2016).</p>	<p>Referencing format for this and all other et al authors has been corrected to <i>et al</i></p>
<p>Write BDA in full on first use:</p> <p><i>In Northern Ireland, it has been reported that over 70% of care home residents had poor oral health (RQIA 2012), and that their oral needs had not been met (BDA, 2012).</i></p>	<p>BDA had been written in full on first use earlier in the preceding sentence:</p> <p><i>This finding has been supported by other studies and reports (British Dental Association (BDA) 2012, Regulatory and Quality Improvements Authority (RQIA) 2012, Porter et al 2015, Reigle and Holm 2016).</i></p>